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ABSTRACT

Because the 1862 and 1890 Morrill Act Land Grant colleges feature predominantly white or predominantly black student enrollments, a study to assess similarities and differences of the respective student bodies was undertaken. A selected sample of students at all southern land grant institutions was asked in the spring of 1977 to respond to a questionnaire dealing with personal and family background, high school experience, work experience, college experience, goals and aspirations, and attitudes toward various issues and topics related to occupational roles in agriculture. Percentages of students growing up on a farm were about the same for both types of schools. The predominantly white 1862 schools had a greater percentage (27 percent) of women enrolled in their colleges of agriculture than did the 1890 schools (18.8 percent). Loans and grants enable 65.3 percent of the 1890 students to pay their way through college while 24.8 percent of the 1862 students received funding from this source. When the desired educational levels were compared, the 1862 students were found to be geared towards obtaining a bachelor's degree with the 1890 students more oriented towards earning a graduate level degree. Of the students who chose to work in an agricultural setting, both groups chose veterinary medicine as the most frequently desired occupation with general farming or ranching as the second. Tabular data at the end of the document is used to summarize the study's findings.

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BACKGROUND CHARACTERISTICS AND GOALS OF AGRICULTURE STUDENTS:
1890-1862 COMPARISONS*

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Background Characteristics and Goals of Agriculture Students: 1890-1862 Comparisons

Given that Land Grant colleges have traditionally emphasized the practical side of education, agriculture curriculums forge an even closer link between educational means and occupational ends than many other courses of study (Potts, 1977). A social trend emphasizing the usefulness and relevance of a college degree has been reflected in rising enrollments at 1862 and 1890 Land Grant schools in general and in Colleges of Agriculture in particular (Metcalf, 1977). Although these changes have been noted for several years, little systematic attention has been given to the shifting composition and aspirations of agriculture student bodies.

The increased interest in agricultural programs is a nationwide phenomenon. Undergraduate agricultural college enrollments in the United States increased by 199 percent during the time period from 1961 to 1976 (Metcalf, 1977). Since 1976 agriculture enrollments have increased by almost one-third. At Penn State alone, undergraduate enrollment figures show a 44 percent increase in agriculture enrollments and a 300 percent enrollment increase in agriculture business and agriculture economics programs, between the years 1973 and 1976 (Holt, 1977). The growing numbers of undergraduate women in agriculture accounted for 54 percent of the overall national enrollment growth in agriculture from 1973 to 1977. During the period 1973 to 1975, women agricultural students increased from 19 percent to 28 percent, while men agricultural students only increased by 8 percent (Metcalf, 1977). The percent of non-white minority students majoring in agriculture at Land Grant institutions has also been increasing in recent years (Johnson, 1977). These significant changes have been noted in agriculture student enrollment patterns on the national level, but relatively little attention

has been directed towards shifting agriculture enrollment patterns in the South.

The purpose of this paper is to review some of the forces underlying shifts in demand and interest in agricultural occupations and to profile agriculture student population at the two sets of Land Grant schools in the Southern region. First, we will review some of the factors redirecting student interest in agriculture. Second, we will note some of the historical and development differences in emphasis that characterize 1890 and 1862 Land Grant colleges. Thirdly, the paper examines selected characteristics, experiences, and aspirations of agriculture students based on a large-scale survey conducted at institutions in the Southern region. Particular attention is given to 1890 and 1862 student body differences and similarities and the role education will play in the future of Southern agriculture.

The New Growth in Agriculture Enrollments

Two interrelated phenomenon underlie the growth of agriculture enrollments in Land Grant schools: an increased agriculture consciousness and a fundamental change in the structure of United States Agriculture. Agriculture, at least in the eyes of some students, is a field of definite opportunity. Students became aware of the important role that agriculture plays in the national economy when the "psychology of surplus" was replaced with the "psychology of shortage" (Holt, 1977) which underscored the importance of food production and distribution. Emphasis shifted from a burden of agricultural surplus in the 60's to basic human survival in the face of a growing world population during the 70's.

Since the beginning of the decade an increasing number of students have recognized the need for advanced training in agriculture occupations. Students also realize that farming is not the only occupation open to people with a degree in agriculture. Now they are aware of expanding opportunities in agribusiness, food production and distribution, agrifinance, farm management, and government

agricultural agencies. Expanding employment opportunities and the improved image of agriculture, based on its importance in the world economy, are primary forces behind the new student attitudes toward agricultural education.

A second reason for the recent enrollment growth in agricultural training can be traced to changes in the structure of U.S. agriculture (Congressional Budget Office, 1978). Decreases in the number of farms and farm employees have been coupled with dramatic increases in the size of individual farms, the value of farm products, and the cost of farm production. At the same time, the number of farm acres has remained nearly constant, meaning that fewer farmers are producing more food. Particularly in the South, small black-owned farms have been severely affected by shifting economies of scale in production agriculture (Marshall and Thompson, 1977). Traditional farming skills and a willingness to work are now rivaled by managerial expertise and access to capital as keys to successful farm operation. Many institutional and social restraints limit the access of small farm operators to the latter resources.

An increase in specialization and differentiation of occupations is reflected by a demand for persons with technical skills and advanced managerial training (Wessels, 1977:117-118). Jobs have proliferated in off-farm industries that supply and service the farmer, while independent farmers themselves have diminished in number. Vertical integration and corporate "farmhand" agriculture (Breimyer, 1977), have eliminated the family farm as a viable alternative for many individuals (Fuller and Mason, 1977). Capital demands of modern agriculture often discourage the entry of individuals into farming, and their interests and aspirations frequently are deflected into farm-related occupations in the broad area of agriculture. These occupations usually resemble those of the larger society; that is, white collar jobs, representing a narrow, or indirect association with the production enterprise. Farming and agriculture in general are viewed less as a way of life than as growing sources of jobs and occupational advancement.

Changes in the occupational structure of American agriculture also are reflected in the curricula of the Colleges of Agriculture. At most schools in the early 1950's the number of options available to agriculture students were limited to approximately a half dozen. Today, many schools offer three or four times that number (Poffenberger, 1977). Training in vocational agriculture and extension methods reflect increasing efforts to reach farmers at all scales of operation and levels of education. In this way, Land Grant colleges have differentiated and specialized in response to the changing structure of American agriculture.

As the spectrum of agricultural occupations broadened, so did the range of people seeking agricultural careers. Increasingly, agriculture students have urban backgrounds, are female, and are minority group members at 1862 and 1890 schools. Traditionally an agriculture student has been the son of a farmer, therefore he generally possessed practical experience as a farmer. With more women and city dwellers entering the field of agriculture a realization has come that these students are not farm oriented. In addition many foreign nationals are enrolling in agricultural curriculums. Foreign-born individuals generally do not share the values, rural backgrounds, and farm experiences of the stereotypical agriculture student at a Land Grant institution. In order to aid the student with only academic exposure to agriculture, many schools provide experiential education in the form of practicums. A study at Colorado State University in 1976 shows that 87 percent of agricultural baccalaureate degree students found employment in the same general career area as their internship. In a related study 30 out of 41 potential employers ranked "related experience" either first or second in importance among factors used in consideration of applicants (Thomas, 1977:1-7).

While minorities may have broader choices in today's job market, the growing number of women in agriculture may find it difficult to find employment in a conservative agribusiness (Gallese, 1978). Also the tendency of minorities and

women to concentrate in basic ag science and/or horticulture may effectively curtail their occupational opportunities (Johnson, 1977). As a result, these individuals may not be in the position to take advantage of new opportunities associated with the increasingly specialized needs of agriculture industry.

1862 and 1890 Land Grant Schools

The terms 1862 and 1890 institutions refer to different legislative acts that gave birth to the system of Land Grant colleges. An educational caste system existed in the United States prior to 1862. The opportunity to obtain a college education was restricted to a select few who could afford to go to college. Belief in the idea of a college accessible to the working and industrial classes led to the passage of the First Morrill Act (1862). First Morrill Act Colleges were established to provide instruction in agriculture and the mechanic arts as well as classical studies (Swenson, 1977).

The Second Morrill Act (1890) provided additional funds for 1862 colleges as well as initial funds for 1890 colleges. These funds pertained to education and not research. Most of the new 1890 colleges existed before the act, and were designated Land Grant colleges following its passage. They were located in each of seventeen Southern and border states in areas where blacks lived. As such, none of the 1890 colleges are in Appalachia or in the Ozarks. Their origins were quite diverse, although most originated as normal schools, or schools for the education of teachers (Seals, 1977).

From nearly the beginning, the states did not continue 1890 funding for education in the agricultural and mechanics arts in proportion to the federal funds. Thus, virtually from the outset separate but unequal standards prevailed. Today, 1862 schools are the larger, predominantly white institutions in each state. The small, predominantly black agriculture schools comprise the 1890 institutions. It was not until the 1970's that efforts to reduce inequities began to progress.

Agricultural teaching programs at 1890 schools have suffered from years of underfunding. The schools rarely had strong support at the state level since most organized groups of agricultural clientele were usually supporters of the 1862 schools. This is still true today and state level funding problems continue (Seales, 1977). However, federal support for 1890 institutions has increased significantly since 1967. Extension funds have been enlarged and, more recently, Hatch Act funds for research have been directed to 1890 institutions in larger amounts.

Enrollments in colleges of agriculture at 1890 schools continue to grow, as they do at the 1862 schools. However, agriculture majors account for nearly one-half of the more than 1,700 students enrolled at the 1890 schools, a much larger proportion of the student population than at the 1862 schools. Agriculture programs at 1862 schools may be larger in absolute numbers and more well-endowed, but 1890 schools have a far greater proportion of their manpower and enrollment committed to agriculture education.

The present report presents data on students enrolled in agriculture curriculums at 1862 and 1890 institutions in such a way that similarities and differences of the two student bodies can be readily assessed. It is not the intent of researchers to explore invidious distinctions between schools, but to foster a healthy environment of mutual knowledge and facilitation that will advance the cause of agricultural education throughout the South.

Managers and designers of agricultural curricula, as well as advisors of individuals making educational and career choices, may both find that knowledge of the backgrounds, experiences, and attitudes of contemporary agriculture students may facilitate their administrative and counseling effectiveness. Comparative knowledge of the 1890 and 1862 agriculture student bodies may pave the way for mutual awareness and interinstitutional cooperation. The origins of today's agriculture students may differ strikingly from traditional conceptions, and important differences besides race may characterize students at 1862 and 1890 schools.

Their aspirations may reveal emerging themes and trends in agricultural education.

METHODS

Sample

Enrollment lists for the Spring 1977 term were obtained for all 1862 and 1890 institutions in the Southern region. These student enrollment lists served as the sampling frame for the study. Texas Tech University and Tuskegee Institute were also included. Although neither are formal Land Grant institutions, each has a large agriculture enrollment and makes a significant contribution to agricultural education in the South.

At 1862 institutions a 15 percent sample, stratified by school, was drawn. It was determined that a complete enumeration would be attempted at the 1890 institutions. Given the relative small student population at some 1890 schools, this was the only strategy that would provide sufficient cases for within school analyses and assure the representativeness of the study.

The Questionnaire

A questionnaire was developed on the basis of researcher interest and the recognized needs of those involved in agricultural education administration and student counseling. A broad effort to canvass the literature yielded a minimum of references and information, moreover, it underscored the general lack of systematic research on higher education in agriculture.

The questionnaire formulated by the regional research committee included six major lines of inquiry. These were: personal and family backgrounds, high school experience, work experience, college experiences, goals and aspirations, and attitudes towards various issues and topics related to occupational roles in agriculture.

Data Collection

In the spring of 1977, respondents were mailed questionnaires with a cover letter explaining the survey. Follow up efforts included mailing an additional questionnaire and letters requesting participation, and finally delivery of a reminder postcard to those that had not yet returned the questionnaire. Some variation in the timing of the mailings was unavoidable primarily due to different school term schedules, but this variation is not considered to have affected the quality of the data. Return rates, adjusted for enrollment list errors, were 60 percent at 1890 institutions and 74 percent at 1862 institutions.

Findings

The 1862 schools have a greater percentage of women enrolled in their colleges of agriculture than do 1890 schools as shown in Table 1. Over 27 percent of the 1862 agriculture students are women as compared to 18.8 percent women agriculture students at 1890 institutions. In regard to minority student populations, the 1890 institutions are more integrated than the 1862 schools. Looking at the 1862 institutions, it can be seen that only 0.8 percent of the agriculture students are black. The 1890 schools have 17.1 percent white students among their minority students in agriculture.

Table 3 shows that although the percentages of students growing up on a farm or ranch and in a city are about the same for 1862 and 1890 schools, the 1862 students tend to be more urban and the 1890 students tend to be more rural. According to Table 4, the majority of the parents of both 1890 and 1862 agricultural students (62.8%) do not live on farms.

Educational levels of fathers and mother of the students at Land Grant institutions are shown in Table 5. The greatest level of disparity exists between the fathers of the 1862 students and the fathers of the 1890 students. At 25.9 percent, college graduate was the most frequently reported educational level attained by fathers of 1862 agriculture students, compared to 8.2 percent of the

1890 fathers in this category. In direct contrast to the well-educated 1862 fathers, are the fathers of 1890 agricultural students, who most frequently (30.4%) fell into the less than 9th grade educational category. High school graduate was the most frequently reported educational level for both 1862 mothers and 1890 mothers with 33.2 percent and 24.4 percent respectively. Even so, there is a significant difference between the educational levels of the two sets of mothers. The 1862 mothers tend to be more educated than the 1890 mothers, who in turn tend to be more educated than the 1890 fathers. Overall the parents of 1862 agriculture students are better educated than parents of 1890 agriculture students.

Table 6 shows that the income levels of the parents of students at 1862 and 1890 schools are very disparate. Parents of 1890 students are at the bottom of the income category with 55.5 percent averaging from under \$5,000 to \$9,999 per year. On the other side of the income category are the parents of 1862 students. Almost 48 percent of them range from \$20,000 to \$49,000 annually in income.

Non-farm managers and administrators were the most frequently reported occupations on Table 7 for the fathers of 1862 agriculture students (16%). Farmer, which was the occupation of 19 percent of the fathers of 1890 students, was also the occupation of 14 percent of the 1862 students' fathers. All other occupations which listed individually had less than 3 percent of the fathers engaged in them are clustered in Table 7 under other occupations. Sixty-three percent of 1862 fathers and 66 percent of the 1890 fathers fall into this blanket category.

Parents, personal savings, and money saved from summer jobs were the major sources of college funds, shown in Table 8, for all the agriculture students. Major differences can be discerned when 1890 students are compared to 1862 students. While money from parents (84.5%), summer jobs (78.3%), and personal savings (75.5%) were the most important sources of college funds for 1862 students, 1890 students listed different sources of their funds for college.

Summer jobs (66.1%) were the most important source of money for college among 1890 agricultural students. Parents (65.8%) were the second most important contributors of funds for their children's education. A radical difference between 1890 and 1862 agriculture students is that 65.3 percent of 1890 students rely on loans and grants to pay their way through college while 24.8 percent of 1862 students receive funding from this source.

As Table 9 shows, most of the agriculture students at both 1862 and 1890 institutions have had work experiences in an agricultural setting. Forty-seven percent of the 1862 students and 55.8 percent of the 1890 students have worked as a home farm employee. Other farm employees include 47.2 percent of 1862 agriculture students and 46.6 percent of the 1890 students. Over 58 percent and 66 percent of the 1862 and 1890 agricultural students respectively have been engaged in other agricultural work.

The most frequently chosen first and second majors at both sets of Land Grant institutions are the subjects of Table 10. Agriculture education and animal science are the most frequently desired first major at 1890 schools, both with 18 percent of the students choosing them. At 1862 schools, 13 percent of the agriculture students chose animal science as their first major. The most frequently chosen second major at both 1890 and 1862 schools was an aggregate category generally called a non-agricultural occupation.

Table 11 shows the responses of 1862 and 1890 agricultural students to three attitudinal items from the questionnaire. When asked their attitudes towards education as related to agricultural work, 73.9 percent of the 1862 students and 62.2 percent of the 1890 students felt that education is a prerequisite for a career in agriculture. Therefore, as shown in Table 12, 97.1 percent of the 1862 agricultural students and 97.5 percent of the 1890 students expect to earn a college degree. Comparison of the desired and expected educational levels of the two agricultural student bodies finds that the 1862 students are geared towards obtaining a bachelor's degree while 1890 students are more oriented

towards earning a graduate level degree. Realistically, the majority (57.1%) of 1862 students expect to complete their education with a bachelor's degree and only 5 percent expect to actually get a doctoral degree. While 29.9 percent of 1890 students want to earn a master's degree, 36.9 percent expect to get one. A greater percentage of 1890 students actually plan to obtain a doctoral degree (16.8%).

Fifty-two percent of all the agricultural students sampled strongly disagreed that agriculture is a declining industry. Likewise, 40.4 percent of the 1862 agricultural students and 60.6 percent of the 1890 agricultural students strongly agree that there are good career opportunities in agriculture. Following these positive attitudes towards agriculture as an occupation, only 26 percent of both 1862 and 1890 students, as shown in Table 13, expect to work on non-agricultural jobs.

Table 13 shows the most frequently desired and expected jobs in agriculture as chosen by Land Grant college agricultural students. Of these 1862 students who have chosen to work in an agricultural setting, 17 percent want to be veterinarians, but only 9 percent expect to reach their goal. The 1890 students follow the same pattern, with 18 percent desiring to be veterinarians, but 13 percent actually expecting to gain the object of their desire. General farming or ranching was the second most frequently mentioned occupation desired and expected by both sets of students.

CONCLUSION

A poll of college of agriculture administrators across the United States yielded the following national trends concerning students enrolled in an agriculture curriculum: Undergraduates tend to have lesser rural residential backgrounds, and more urban backgrounds. They are more heterogeneous in backgrounds and abilities. Their ranks include increasing numbers of women and minorities. The findings among the agricultural students at Land Grant schools in the Southern region supports these national trends. Agriculture students at 1862 schools tend to come more from urban areas than from rural ones. The majority of the 1890 and 1862 students' parents were not currently residing on a farm or ranch at the time of the study. Dissimilar family backgrounds do exist between the two sets of agriculture students.

With 27.3 percent female enrollment in agriculture, the 1862 schools in the Southern region are almost equal to the national average of 28 percent female agriculture students. Racial composition of the two student bodies is also a major point of comparison. The 1890 schools have 17.1 percent minority (white) students as compared to 0.8 percent black students enrolled in 1862 schools. New research and extension programs at 1890 schools have influenced the enrollment of whites. Apparently an increasing number of white students are feeling psychologically and socially secure as minorities. This ability to cope with a racial situation has led many whites to seriously examine advantages that 1890 schools hold for them. Proximity, low costs, marketability of degrees, as well as expanding programs, are favorable factors for the 1890 schools that are attractions for both white and black students.

College of Agriculture administrators have pointed out that many agriculture students reared in urban environments have only academic exposure to agriculture. Over 58 percent of the 1862 students and 66 percent of the 1890 students in the regional study have had work experience in an agricultural related field. But for the 34 to 42 percent of the agricultural students that may be less familiar with the vocabulary of agriculture, and those who lack skills in applied areas, many Land Grant schools are liberalizing their programs, giving more consideration to urbanites and women. These Morrill Act schools are broadening their curricular offerings by adding new majors and establishing formalized internships to provide practical experience to students. Apparently such practical programs are extremely important because most potential employers of agricultural students indicate that they want employees with both technical training and practical farm experience. Studies have also shown that an overwhelming majority of agriculture students who participate in an internship program find employment in the same general career area as their internship.

Finding a job is one of the most pressing matters that will face the agriculture students after graduation. At the present time, there is a great demand for people with degrees in traditional production-oriented areas of agriculture, food science, and related sciences. While minorities have a broad set of choices in the job market, the tendency of minorities and women to concentrate in certain fields of study may effectively curtail their occupational opportunities. The majority of the agricultural students at the predominantly black 1890 institutions in this regional study chose agricultural education and animal science as their first major. The 13 percent at 1862 schools that chose animal science as their first major shows that white students also tend to favor this major over all others available, however. Horticulture and animal science majors account for a high percentage of women in agriculture colleges. These findings

have serious implications for the quality of the counseling that students are receiving at Land Grant Colleges. Obviously, a stronger career and placement counseling needs to take place early in the agricultural student's academic career. In this way, students can be made aware of career opportunities and thus be steered away from overcrowded, inopportune, and inappropriate majors.

The present trend of soaring agricultural enrollments at the undergraduate level is expected to continue for at least 20 years. Unless a global food crisis occurs, the enrollments in Colleges of Agriculture will probably level off around the year 2000 A.D. Not all of the future agriculture students will be in the 18 to 22 age range. In addition to typical undergraduate students in agriculture, there will be an increasing number of older students seeking a new career in agriculture. Adults who want to take continuing education courses may also be attracted to agriculture classes at their local college. In order to cope with the popularity of agriculture at the academic level, Land Grant institutions may have to establish quotas for their programs or begin administering professional pre-test to determine the aptitude of applicants. Another alternative to controlling rising College of Agriculture enrollments would be to design a two year program, leading to an associate degree in a specialized area of agriculture.

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TABLE 1
 MALE AND FEMALE AGRICULTURE
 STUDENTS AT 1890 AND
 1862 SCHOOLS

Category Label	1862	1890
Male	72.7%	81.2%
Female	27.3	18.8
	N=2535	N=1016

$\chi^2 = 27.71$
 $p < .0001$
 missing=2

TABLE 2
RACE OF AGRICULTURE STUDENTS AT
1890 AND 1862 SCHOOLS

Category Label	1862	1890
American Indian	0.2%	0.5%
Black	0.8	73.0
Mexican-American	0.9	0.0
Puerto Rican	0.1	0.4
Other Latin-American	0.9	0.8
Oriental	0.5	0.2
White	94.9	17.1
Other	1.7	7.9
	N=2535	N=1016

$\chi^2 = 2437.4$
 $p < .0001$
 missing=34

TABLE 3
 SIZE OF HOMETOWN OF AGRICULTURE STUDENTS
 AT 1890 AND 1862 SCHOOLS

Category Label	1862 students	1890 students
Farm or ranch	19.8	19.5
Country outside of city	8.4	14.6
Town or village	13.8	18.1
Small city	21.0	17.7
Medium city	23.0	15.9
Metro city	14.1	14.3
	N=2535	N=1016

$\chi^2 = 57.4$
 $p < .0001$
 missing=19

TABLE 4

ARE THE PARENTS OF 1890 AND 1862 AGRICULTURE
STUDENTS PRESENTLY LIVING ON A FARM?

Category Level	1862 students	1890 students
Yes, own one	23.0	22.5
Yes, lease or rent	1.2	2.3
Yes, tenant-farm	0.4	1.7
No, but own or rent one	14.1	7.3
No	61.4	66.3
	N=2535	N=1016

$\chi^2 = 51.2$
 $p < .0001$
 missing=27

TABLE 5

FATHER'S AND MOTHER'S LEVEL OF EDUCATION FOR AGRICULTURE
STUDENTS AT 1862 AND 1890 INSTITUTIONS

Category Label	1862		1890	
	Father	Mother	Father	Mother
Less than 9th grade	6.2%	3.4%	30.4%	19.9%
Didn't graduate high school	4.9	4.4	15.5	21.1
Vocational training/didn't graduate high school	1.1	0.4	3.4	23.0
Graduated high school	11.4	33.2	17.7	24.4
Vocational training after high school	4.5	9.3	5.6	5.1
Some college/didn't graduate	17.3	19.5	7.8	6.9
College graduate	25.9	21.4	8.2	8.7
Graduate work	18.0	7.5	8.2	8.3
Don't know	0.8	0.8	3.5	2.3
	N=2535		N=1016	

TABLE 6
PARENTS' YEARLY INCOME -- AGRICULTURE STUDENTS
AT 1890 AND 1862 INSTITUTIONS

Category Label	1862 students	1890 students
Less than \$5,000	2.8%	26.7%
5,000 to 9,999	7.2	28.8
10,000 to 14,999	16.4	16.9
15,000 to 19,999	16.4	10.0
20,000 to 24,999	20.7	7.4
25,000 to 49,999	27.1	6.9
50,000 to 74,999	6.0	1.9
75,000 to 99,999	1.7	0.8
Over 100,000	1.7	0.7
	N=2535	N=1016

$\chi^2 = 838.6$
 $p < .0001$
 missing=436

TABLE 7
 FREQUENTLY REPORTED OCCUPATIONS
 OF FATHERS OF AGRICULTURAL
 STUDENTS AT 1890 AND
 1862 INSTITUTIONS

Category Label	1862 students	1890 students
Non-farm managers and administrators	16%	5%
Farm foreman	3	1
Non-farm, non-specified laborers	1	6
Farmers (owners & tenants)	14	19
Occupation not reported	3	13
Other occupations	63	66
	N=2535	N=1016

TABLE 8

SOURCES OF COLLEGE FUNDS — 1890 AND 1862
 AGRICULTURE STUDENTS (PERCENT
 RECEIVING EACH SOURCE)

Category Label	1862 students	1890 students	χ^2
Scholarships	26.7%	38.7%	42.1*
Student loans/grants	24.8	65.3	451.2*
Own savings	75.5	63.1	46.9*
Part-time work	54.7	58.4	3.4
Parents	84.5	65.8	136.1*
Veterans benefits	8.0	12.9	15.9*
Spouse	10.6	12.7	2.4
Other relative/friends	9.9	18.9	43.6*
Summer jobs	78.3	66.1	48.9*

* $p < .0001$.

TABLE 9
WORK EXPERIENCES OF 1862 AND
1890 AGRICULTURE STUDENTS

Category Label	1862 students	1890 students	χ^2
Home farm employee	47.0%	55.8%	19.1*
Other farm employee	47.2	46.6	0.05
Other agricultural work	58.2	66.2	15.9*
Home economics employee	5.1	10.0	20.4*

* $p < .0001$.

TABLE 10

FIRST AND SECOND MAJORS IN AGRICULTURE AT
1890 AND 1862 INSTITUTIONS

	1862		1890	
	1st major	2nd major	1st major	2nd major
	Percent			
Agriculture, General	3	2	9	2
Agriculture, Business	1	3	4	7
Agriculture, Economics	8	3	8	2
Agriculture, Education	3	2	18	2
Agronomy	7	3	7	6
Crop Science	0	1	6	6
Animal Science	13	6	18	12
Dairy Science	1	3	0	0
Forestry	5	2	2	0
Horticulture	8	5	2	6
Poultry Science	1	1	—	3
Pre-veterinary Medicine	5	6	5	3
Wildlife & Fisheries	4	2	0	—
Animal Science (Pre-vet)	3	3	3	4
Biology-Microbiology	2	3	1	7
Landscape Architecture/Design	2	5	1	—
Ornamental Horticulture	3	4	1	—
Zoology	3	3	—	—
Community & Rural Development	0	—	3	—
Natural Resources/Conservation	0	1	2	5
Non-Agriculture or Home Economics	3	22	3	20
	N=2512	N=585	N=1008	N=217

TABLE 11

RESPONSES OF 1862 AND 1890 STUDENTS
SELECTED STATEMENTS ABOUT AGRICULTURE

Statement	1862 schools	1890 schools	χ^2
	----- Percent -----		
<u>There are good career opportunities in agriculture.</u>			
Strongly disagree	0.6	0.7	
Disagree	3.6	1.3	
Undecided	8.9	4.2	
Agree	46.6	33.1	
Strongly agree	40.4	60.6	125.5*
<u>Most work in agriculture can be done by people with little education.</u>			
Strongly disagree	19.6	20.2	
Disagree	54.3	42.0	
Undecided	13.2	15.4	
Agree	11.7	16.8	
Strongly agree	1.2	5.5	91.5*
<u>Agriculture is a declining industry.</u>			
Strongly disagree	52.3	51.3	
Disagree	32.7	27.9	
Undecided	7.0	6.4	
Agree	5.0	8.2	
Strongly agree	3.0	6.2	36.8*

* $p < .0001$.

TABLE 12
 DESIRED AND EXPECTED EDUCATIONAL LEVELS OF
 AGRICULTURAL STUDENTS AT 1890 AND
 1862 INSTITUTIONS

Category Label	1862		1890	
	desired	expected	desired	expected
	Percent			
Quit before bachelor	1.3	2.1	0.5	1.4
Vocational/business school	1.2	0.9	1.5	1.3
Bachelor's degree	31.7	57.1	15.0	29.4
Master's degree	27.2	21.7	29.9	36.9
Professional degree	21.2	13.3	18.4	14.4
Doctoral degree	17.4	5.0	34.7	16.8
	N=2448	N=2443	N=956	N=954

TABLE 13
 FREQUENTLY DESIRED AND EXPECTED JOBS IN AGRICULTURE
 AT 1890 AND 1862 INSTITUTIONS

Category Label	1862 Students		1890 Students	
	desired	expected	desired	expected
	Percent			
Non-agriculture job	20	26	20	24
General farmer/rancher	12	10	7	7
County agent	1	1	3	3
Veterinarian	17	9	18	13
Vocational agriculture teacher	1	2	2	4
Greenhouse/nursery owner or manager	5	4	2	1
Agricultural researcher	1	1	4	3
Extension specialist	1	2	3	4
Agricultural educator	1	1	5	4
Wildlife specialist	3	1	1	0
Soil/water conservationist/engineer	1	1	4	5
Forester	2	3	1	1
	N=2261	N=1987	N=859	N=718